

Appln. No.: 10/615,522
Amendment Dated February 1, 2007
Reply to Office Action of 11/01/2006

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Amendments to the Specification:

Please replace the title with the following title:

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Apparatus and Method For Reducing Image Sensor Lag

Please replace the paragraph, beginning at page 4, line 1, with the following rewritten paragraph:

Substrate 12 may be a semiconductor substrate (e.g., silicon) and the electronic circuitry that is formed in substrate 12 may be fabricated in accordance with any semiconductor device fabrication process, including CMOS, bipolar CMOS (BiCMOS), and bipolar junction transistor fabrication processes. A variety of different types of devices may be formed in substrate 12. The electrically conductive vias 21, 40 that extend through the interconnect structure 14 are filled with an electrically conductive material (e.g., tungsten, copper, or aluminum). The pixel electrodes also are formed from an electrically conductive material (e.g., tungsten, copper, or aluminum). The n-type regions 28-32 may be formed from a semiconductor material (e.g., amorphous silicon, amorphous carbon, amorphous silicon carbide, amorphous germanium, or amorphous silicon-germanium) that is doped n-type (e.g., doped with phosphorous in the case of amorphous silicon). The i-layer 34 may be formed of a semiconductor material (e.g., hydrogenated amorphous silicon, amorphous carbon, amorphous silicon carbide, amorphous germanium, or amorphous silicon-germanium) that has a thickness on the order of about 1 micrometer. The p-type layer 36 may be formed of a semiconductor material (e.g., amorphous silicon, amorphous carbon, amorphous silicon carbide, amorphous germanium, or amorphous silicon-germanium) that is doped p-type (e.g., doped with boron in the case of amorphous silicon). The electrically conductive layer 38 is formed of an electrically conductive material that is ~~opaque~~ substantially transparent to light with a wavelength within a target wavelength range. In some implementations, the electrically conductive layer may be formed of indium-tin-oxide or zinc oxide.